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What Is Claimed Is:

1. An expression cassette for expression of a desired molecule, which cassette comprises:

a) an RB47 binding site nucleotide sequence upstream of a restriction endonuclease site for insertion of a desired coding sequence to be expressed; and

b) a nucleotide sequence encoding a polypeptide which binds RB47 binding site.

2. The expression cassette of claim 1 further comprising a promoter sequence operably linked to and positioned upstream of the RB47 binding site nucleotide sequence.

3. The expression cassette of claim 2 wherein the promoter sequence is derived from a *psbA* gene.

4. The expression cassette of claim 3 wherein the coding sequence is heterologous to the *psbA* gene.

5. The expression cassette of claim 1 wherein the cassette comprises a plasmid or virus.

6. The expression cassette of claim 1 further comprising and operably linked thereto a nucleotide sequence encoding RB60.

7. The expression cassette of claim 1 wherein the RB47 binding polypeptide is selected from the group consisting of RB47, RB47 precursor and a histidine-modified RB47.

8. An expression cassette for expression of a desired molecule, which cassette comprises:

a) an RB47 binding site nucleotide sequence upstream of a restriction endonuclease site for insertion of a desired coding sequence to be expressed;

and

b) a nucleotide sequence encoding a polypeptide which regulates the binding of RB47 to the RB47 binding site.

9. The expression cassette of claim 8 wherein the regulatory polypeptide is RB60.

10. A recombinant RB47 protein.

11. A recombinant RB60 protein.

12. An isolated nucleotide sequence encoding RB47.

13. An isolated nucleotide sequence encoding a histidine-modified RB47.

14. An isolated nucleotide sequence encoding RB47 precursor.

15. The nucleotide sequence of claim 12 from nucleotide position 197 to 1402 in Figures 1A-1B and SEQ ID NO 5.

16. The nucleotide sequence of claim 13 from nucleotide position 1 to 1269 in Figures 5A-5B and SEQ ID NO 14.

17. The nucleotide sequence of claim 14 shown in from nucleotide position 197 to 2065 in Figures 1A-1C and SEQ ID NO 5.

18. An expression cassette comprising the nucleotide sequence of claim 12, 13 or 14.

19. An isolated nucleotide sequence encoding RB60.

20. The nucleotide sequence of claim 18 from nucleotide position 16 to 1614 in Figures 2A-2B and SEQ ID NO 10.

21. An expression cassette comprising the nucleotide sequence of claim 19.

22. An expression system comprising a cell

transformed with the expression cassette of claim 1.

23. The expression system of claim 22 wherein the cell is a plant cell.

24. The expression system of claim 23 wherein the plant cell endogenously expresses RB47.

25. The expression system of claim 23 wherein the plant cell endogenously expresses RB60.

26. The expression system of claim 23 wherein the plant cell endogenously expresses RB47 and RB60.

27. The expression system of claim 22 wherein the cell is a eukaryotic cell.

28. The expression system of claim 22 wherein the cell is a prokaryotic cell.

29. The expression system of claim 22 further comprising the expression cassette of claim 21.

30. An expression system comprising a cell transformed with the expression cassette of claim 8.

31. The expression system of claim 29 further comprising the expression cassette of claim 18.

32. A cell stably transformed with the expression cassette of claim 18.

33. A cell stably transformed with the expression cassette of claim 21.

34. A cell stably transformed with the expression cassette of claims 18 and 21.

35. The expression cassette of claim 1 further comprising an inserted desired coding sequence.

36. An expression system comprising a cell transformed with the expression cassette of claim 35, wherein the coding sequence is expressed forming the desired molecule upon activation of the RB47 binding

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site with RB47.

37. The expression system of claim 36 wherein the cell is a plant cell endogenously expressing RB47.

38. The expression system of claim 36 wherein the cell is stably transformed with the expression cassette of claim 21.

39. An expression system comprising a cell transformed with an expression cassette comprising a promoter sequence, a RB47 binding site sequence, a desired coding sequence for a molecule, and a nucleotide sequence for encoding a polypeptide which binds RB47 binding site, wherein all sequences are operably linked.

40. A method of preparing a desired recombinant molecule wherein the method comprises cultivating the expression system of claim 36.

41. A method of preparing a desired recombinant molecule wherein the method comprises cultivating the expression system of claim 39.

42. A method for expressing a desired coding sequence comprising:

a) forming an expression cassette by operably linking:

1) a promoter sequence;

2) a RB47 binding site sequence;

3) a desired coding sequence; and

4) a nucleotide sequence encoding a polypeptide which binds RB47 binding site; and

b) introducing the expression cassette into a cell.

43. The method of claim 42 wherein the cell is a plant cell endogenously expressing RB47.

44. The method of claim 42 wherein the cell is a plant cell endogenously expressing RB60.

45. The method of claim 42 further comprising inducing expression with a promoter inducer molecule.

46. The method of claim 45 wherein the promoter inducer molecule is IPTG.

47. The method of claim 42 wherein the cell is transformed with the expression cassette of claim 21.

48. A method for expressing a desired coding sequence comprising:

a) forming an expression cassette by operably linking:

1) a promoter sequence;

2) a RB47 binding site sequence; and

3) a desired coding sequence;

and

b) introducing the expression cassette into a plant cell endogenously expressing RB47.

49. The method of claim 48 wherein the expression cassette further comprises a nucleotide sequence encoding RB60.

50. A method for the regulated production of a recombinant molecule from a desired coding sequence in a cell, wherein the cell contains the expression cassette of claim 34, wherein expression of the coding sequence is activated by RB47 binding to the RB47 binding site thereby producing the recombinant molecule.

51. A method of forming an expression cassette by operably linking:

a) a RB47 binding site sequence;

b) a cloning site for insertion of a desired

coding sequence downstream of the RB47 binding site sequence; and

c) a nucleotide sequence encoding a polypeptide which binds the RB47 binding site.

52. The method of claim 51 further comprising a promoter sequence operably linked upstream to the RB47 binding site sequence.

53. The method of claim 51 further comprising a desired coding sequence inserted into the insertion site.

~~54.~~ 10. A method of screening for agonists or antagonists of RB47 binding to RB47 binding site, the method comprising the steps:

a) providing a cell expression system containing:

1) a promoter sequence;

2) a RB47 binding site sequence;

3) a coding sequence for an indicator polypeptide; and

4) a polypeptide which binds to the RB47 binding site sequence;

b) introducing an antagonist or agonist into the cell; and

c) detecting the amount of indicator polypeptide expressed in the cell.

~~55.~~ 11. A method of screening for agonists or antagonists of RB60 in regulating RB47 binding to RB47 binding site, the method comprising the steps:

a) providing an expression system in a cell containing:

1) a promoter sequence;

2) a RB47 binding site sequence;

3) a coding sequence for an indicator polypeptide;

4) a polypeptide which binds to the RB47 binding site sequence; and

5) a RB60 polypeptide;

b) introducing an agonist or antagonist into the cell; and

c) detecting the amount of indicator polypeptide expressed in the cell.

56. 54 An article of manufacture comprising a packaging material and contained therein in a separate container the expression cassette of claim 1, wherein the expression cassette is useful for expression of a desired coding sequence, and wherein the packaging material comprises a label which indicates that the expression cassette can be used for expressing a desired coding sequence when the RB47 binding site is activated by RB47.

57. 55 The article of manufacture of claim 56 54 further comprising in a separate container the expression cassette of claim 18.

58. 56 The article of manufacture of claim 56 54 further comprising in a separate container the expression cassette of claim 21.

59. 57 An article of manufacture comprising a packaging material and contained therein in a separate container the expression system of claim 22, wherein the expression system is useful for expression of a desired coding sequence, and wherein the packaging material comprises a label which indicates that the expression

system can be used for expressing a desired coding sequence when the RB47 binding site is activated by RB47.

~~60~~ 58. An article of manufacture comprising a packaging material and contained therein in a separate container the stably transformed cell of claim 32, wherein the cell is useful as an expression system, and wherein the packaging material comprises a label which indicates that the expression system can be used for expressing a desired coding sequence when the RB47 binding site is activated by RB47.

~~61~~ 59. An article of manufacture comprising a packaging material and contained therein in a separate container the stably transformed cell of claim 33, wherein the cell is useful as an expression system, and wherein the packaging material comprises a label which indicates that the expression system can be used for expressing a desired coding sequence when the RB47 binding site is activated by RB47 and regulated by RB60.

~~62~~ 60. An article of manufacture comprising a packaging material and contained therein in a separate container the stably transformed cell of claim 34, wherein the cell is useful as an expression system, and wherein the packaging material comprises a label which indicates that the expression system can be used for expressing a desired coding sequence when the RB47 binding site is activated by RB47 and regulated by RB60.

~~63~~ 61. An article of manufacture comprising a packaging material and contained therein in a separate container the expression cassette of claim 2, wherein the expression cassette is useful for expression of a

RNA transcript, and wherein the packaging material comprises a label which indicates that the expression cassette can be used for producing *in vitro* a RNA transcript when the RB47 binding site is activated by RB47.

~~64~~ 62. The article of manufacture of claim ~~63~~ 61 wherein the promoter sequence is selected from the group consisting of T3 and T7 promoters.

~~65~~ 63. The article of manufacture of claim ~~63~~ 61 further comprising in separate containers a polymerase, a buffer and each of four ribonucleotides, reagents for *in vitro* RNA transcription.